

REMARKS

The drawings have been objected to, as figure numbers 11A and 11B have been duplicated. Applicant is submitting a request to amend the drawings, which obviates this objection.

Claims 5 and 6 have been objected to for being identical. Applicant has canceled Claim 5, thereby overcoming this objection.

Claim 27 has been rejected under 35 U.S.C. 112, second paragraph for insufficient antecedent basis for the term "the spacing" in Claim 27. Claim 27 has been amended to replace 'the spacing' with 'spacing', thereby overcoming this rejection of Claim 27.

Claims 1, 12, 22 and 28 have been rejected under 35 U.S.C. 102(e) as being anticipated by Hui et al. (U.S. Patent 6,765,254). Claims 1, 12, 22 and 28 have been canceled, thereby rendering this rejection moot.

Claims 1 and 22 have been rejected under 35 U.S.C. 102(e) as being anticipated by Ngo et al. (U.S. Patent 6,774,432). Claims 1 and 22 have been canceled, thereby rendering this rejection moot.

Claims 4-6, 8-10, 13, 24, 25 and 29 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Hui et al. or Ngo et al. Claim 5 has been canceled, thereby rendering the rejection of this claim moot.

Claim 4 recites 'wherein the light-absorbing structure comprises a continuous layer of polycrystalline silicon'. Claim 10 recites 'wherein the light-absorbing structure comprises amorphous silicon'. Claim 24 recites 'the light-absorbing structure is formed by depositing a first layer of polycrystalline silicon'.

The Examiner indicates that it would be obvious to replace the light absorbing structures of Hui et al.. or Ngo

et al. with polycrystalline silicon or amorphous silicon. However, Hui et al. teach that the UV radiation blocking layer 112 comprises silicon rich TCS nitride. (Hui et al., Col. 4, lines 15-17.) Ngo et al. teach that the UV-opaque material can be silicon rich oxide, silicon rich nitride, silicon rich carbide or silicon rich carbide-nitride. (Ngo et al., Col. 5, lines 39-43.) It is well known that the materials described by Hui et al. and Ngo et al. are dielectric materials. Note that if the UV blocking layers of Hui et al. and Ngo et al. are not made of dielectric materials, then the various contacts described by these references would be undesirably shorted via the UV blocking layer.

It would therefore not be obvious to simply replace the dielectric materials described by Hui et al. and Ngo et al. with a non-dielectric material, such as polycrystalline silicon or amorphous silicon, because these non-dielectric materials would result in shorting or leakage between the contacts.

For these reasons, Claims 4, 10 and 24 are allowable over Hui et al. and Ngo et al. Claim 25, which depends from Claim 24, is allowable over Hui et al. and Ngo et al. for at least the same reasons as Claim 24.

Claim 6 recites 'wherein the light-absorbing structure comprises a first patterned layer of polycrystalline silicon'. Claim 25 recites 'patterning the first polycrystalline silicon layer'. It would not be obvious to pattern the UV blocking layers of Hui et al. and Ngo et al. because such patterning would reduce the UV blocking capability of these layers.

For these reasons, Claims 6 and 25 are allowable over Hui et al. and Ngo et al. Claims 7-9, which depend from

Claim 6, are allowable over Hui et al. and Ngo et al. for at least the same reasons as Claim 6.

Claim 7 recites 'a pre-metal dielectric structure' having 'a light absorbing structure' comprising 'a first patterned layer of polycrystalline silicon' and 'a second patterned layer of polycrystalline silicon'. Neither Hui et al. nor Ngo et al. teach a pre-metal dielectric structure having multiple layers of light absorbing material. For this additional reason, Claim 7 is allowable over Hui et al. and Ngo et al.

Claim 13 recites 'sidewall dielectric material located on the one or more exposed surfaces of the light-absorbing structure'. Claim 29 recites 'forming sidewall dielectric material on the one or more exposed surfaces of the light-absorbing structure'. The Examiner indicates it would have been obvious to form sidewall dielectric material on exposed surfaces of the light-absorbing structure of Hui et al. or Ngo et al. However, as described above, the light-absorbing structures of Hui et al. and Ngo et al. are already dielectric material. Thus, it is unnecessary to add sidewall dielectric material to the light-absorbing structures of Hui et al. and Ngo et al. For this reason, Claims 13 and 29 are allowable over Hui et al. and Ngo et al.

Claims 2-3, 7, 11, 23 and 26 have been objected to as being dependent upon a rejected base claim. The Examiner has indicated that these claims would be allowable if rewritten in independent form, including all of the limitations of the base claim and any intervening claims. Applicant has amended Claims 2, 7, 11, 23 and 26 in accordance with the Examiner's suggestions. As a result, Claims 2-3, 7, 11, 23 and 26 are allowable.

CONCLUSION

Claims 2-4, 6-11, 13, 23-27 and 29 are pending in the present application. Claims 2-3, 7, 11, 23 and 26 are allowable. Reconsideration and allowance of Claims 4, 6, 8-10, 13, 24-24, 27 and 29 is requested. If the Examiner has any comments or questions, he is invited to call the undersigned.

Respectfully submitted,



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